

DAVIS⁹ has also devised a method for increasing the rapidity and total percentage of germination in *Oenothera* seeds. He places the seeds on pads of filter paper in Petri dishes, adding water until a surplus remains about the edge of the pad. The dishes, covers, papers, and water are all sterilized before the seeds are inserted. The dishes, covered and kept in shaded portions of the greenhouse, showed much more prompt and complete germinations than samples of the same seeds sown in soil. The author notes that after periods of high temperature there followed a burst of germinations, and believes that the best results will be secured by subjecting the dishes of seeds to high temperatures in an incubator. DAVIS points out as one of the distinct advantages of his method that all seedlike structures which fail to germinate remain available for subsequent study.—GEO. H. SHULL.

Color inheritance in *Oxalis*.—Several wild forms of *Oxalis* growing in nature at Tokyo, Japan, are found by NOHARA¹⁰ to constitute true breeding biotypes, and one wild form indicated its hybrid nature by producing 3 types of offspring in approximately a 1:2:1 ratio. The 4 homozygous biotypes were subjected to genetical analysis by controlled breeding. Reciprocal and double reciprocal combinations yielded only the same results as the single crosses, showing no differential effect of maternal and paternal germ cells. The 4 forms differed from each other in the presence and absence of a purple bar across the base of the petals forming an "eye," and in the occurrence of several degrees of purple coloration in the leaves. The leaf and flower pigmentation are associated, either by linkage or by the production of purple color in the leaves and the purple eye spot in the flowers by the same gene. As one of the true breeding forms has purple leaves and no eye spot, the relation of these characteristics seems to be more logically referable to linkage. The 4 forms differ from one another severally by single factors, thus presenting an instance of BAUR'S "triangle," or multiple allelomorphism, although the significance of this fact does not seem to have been appreciated by the author. In all crosses the heterozygotes are intermediate between the parents, the F₂ showing ratios approximating 1:2:1, and the F₃ behaviors are typical of Mendelian monohybrids. Three of NOHARA'S forms are recognized by him as the taxonomic forms *O. corniculata* L., *O. stricta* L., and *O. corniculata tropaeoloides* (Schlachter) Makino, and the importance of such genetical studies in the solution of taxonomic problems is made clear.—GEO. H. SHULL.

Relation of leaves to climate.—BAILEY and SINNOTT,¹¹ in continuing their study of the phylogeny of angiosperms, have begun an investigation of the

⁹ DAVIS, B. M., A method of obtaining complete germination of seeds in *Oenothera*, and of recording the residue of sterile seedlike structures. Proc. Nat. Acad. Sci. 1:360-363. 1915.

¹⁰ NOHARA, S., Genetical studies on *Oxalis*. Jour. Coll. Agric. Imp. Univ. Tokyo 6:165-182. pl. 1. 1915.

¹¹ BAILEY, I. W., and SINNOTT, E. W., The climatic distribution of certain types of angiosperm leaves. Amer. Jour. Bot. 3:24-39. 1916.